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ABSTRACT

A study of Hawaii's JOBS WORKS! waiver demonstration project determined its influence on participant self-sufficiency and receipt of Aid to Families with Dependent Children (AFDC). Hawaii received a waiver to lift the 8-week federal limitation on upfront job search, operate on less than a statewide basis, require 18 hours of work, and secure matched federal funds for implementation. About 6,000 individuals in the Job Opportunities and Basic Skills Program (JOBS) were randomly assigned to experimental or control groups. JOBS WORKS! offered immediate job search and readiness activities and job development and placement services to AFDC recipients waiting for openings in JOBS activities. Data were from administrative records of the Hawaii Departments of Human Services and of Labor and Industrial Relations. Self-sufficiency measures included employment rates, length of employment, amount of total earnings, and total family income. AFDC measures included average amount of benefits, exit and recidivism rates, use of subsidized child care, and rates at which persons were sanctioned for failing to comply with program requirements. Results indicated that rates and length of employment and total earnings were significantly higher for the experimental group. Experimental members experienced a 6.3 percent net decrease in average AFDC benefits and left the rolls at significantly higher rates. However, the experiment had no significant effect on rates of AFDC recidivism. (Statistical methods and detailed results are appended.) (YLB)

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Participation Patterns and Program Impacts of Hawaii's JOBS WORKS! Demonstration Project

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Executive Summary

Background

The State of Hawaii received an 1115 waiver from the U.S. Department of Health and Human Services in 1994 to implement the Creating Work Opportunities for JOBS Clients Project. This initiative, which later became known as JOBS WORKS!, permitted Hawaii to:

- Lift the 8-week federal limitations on upfront job search
- Operate the waiver on less than a statewide basis
- Require 18 hours of work from participants, and
- Secure additional matched federal funds to implement the waiver.

The Hawaii Department of Human Services (HDHS) contracted with the Center for the Study of Human Resources at the University of Texas at Austin (CSHR) to conduct an impact evaluation of the JOBS WORKS! demonstration. The pilot operated on the Island of Oahu from January 1995 through December 1996.

The JOBS WORKS! Treatment

The JOBS WORKS! demonstration offered immediate job search and job readiness activities, as well as job development and placement services, to AFDC recipients typically waiting for "openings" in education and training activities of the regular Hawaii JOBS program. JOBS WORKS! was based on the premise that AFDC adults and their families would benefit from these labor market experiences, instead of simply waiting for the more intensive human capital development options of the Hawaii JOBS program. Labor force participation, followed by education and training, was expected to increase income through work and reduce welfare payment in the short-term, while improving the long-term livelihood prospects of the participants and their families. A specialized unit, located in Honolulu, provided employment services to JOBS WORKS! participants, prior to referral to the regular JOBS program.

The JOBS WORKS! Evaluation

For the evaluation, which was designed as a classical experiment, approximately 6000 individuals in the JOBS selection pool were randomly assigned into either an experimental or control group. Experimental group members were called into the JOBS WORKS! demonstration. Control group members, who received the same treatment as the rest of the island's JOBS eligible, remained idle in the selection pool until called in for normal JOBS treatments.

The random assignment resulted in a experimental and control groups that did not differ systematically on measured or unmeasured background characteristics when they entered the study. Because of this equivalence between the two groups at the time of random assignment, any subsequently observed differences between the groups can be safely attributed to the effects of the differing treatment they received during the experiment.

Most of the data used to evaluate the impacts of the demonstration came from administrative records kept by the Hawaii Department of Human Services. These records covered client demographic attributes, periods of AFDC receipt, program activities, benefits received, sanctions and so forth. Due to biases that always exist in self-reported employment data, all employment-related impacts were measured using unemployment insurance (UI) earnings records kept by the Hawaii Department of Labor and Industrial Relations (DLIR).

A summary of the key findings from this analysis follows.

Findings on Program Implementation

JOBS WORKS! services were delivered by a single unit in Honolulu that served the entire island of Oahu. The plan called for a staff of eighteen workers, ten of whom were to be job development specialists. Staffing issues were a major constraint on program operations. Not all of the planned positions were filled, and turnover, training, and reductions in force (RIF's) were problems. As a result of staff overload, the number of individuals participating in the program was smaller than expected. By the end of the experimental period, members of the experimental group were waiting as long for job search as members of the control group were waiting for education and training. Also

occurring during this time was a general economic slump in Hawaii. AFDC caseload had been on a continuing upward trend. from about 13,400 in 1989 to about 21,500 when the experiment began in 1995.

The program operated as planned until the last quarter of 1995. At that time, the treatment afforded to the experimental group began to change. Instead of being called in immediately after randomization to begin job search, the control group began to experience ever increasing lags between randomization and activity. By the end of the experiment, the treatments afforded the experimental group were not very different than the non-treatment afforded the control group. For this reason, the analysis of the experiment was limited to the sample of clients randomized on or before September, 1995. This subset of the sample included slightly more than half of the individuals randomized.

The Findings on Program Impacts

Differences in impacts between the experimental and control groups were calculated to judge the influence of JOBS WORKS! on participants' self-sufficiency and AFDC participation. Specific self-sufficiency measures included: employment rates, length of employment, amount of total earnings, and total family income. AFDC measures included: average amount of AFDC benefits per case, AFDC exit and recidivism rates, use of subsidized child care, and rates at which persons were sanctioned for failing to comply with program requirements.

Table I summarizes the results of these calculations. Taken together, these results indicate that the JOBS WORKS! demonstration significantly improved self-sufficiency for its early participants and reduced these persons' dependence on AFDC. Rates of employment, length of employment, and total earnings were all significantly higher for experimental group members than control group members during the first twenty-one months after assignment. While the differences in total family income between the two groups were insignificant, this finding is not particularly meaningful because nearly every family in both groups had some income. Moreover, the amount of family income was significantly higher for experimental group members among those families with earned income.

Table I. Summary of Findings

Research Question	Magnitude of estimated adjusted net effect	Was estimated effect statistically significant?
1. Did the demonstration promote self-sufficiency?		
Employment Rate	4.5 Percent	Yes
Length of Employment	1.33 Months	Yes
Earnings	28.5 Percent	Yes
Total Family Income		
Probability that family earned income	0.04 Percent	No
Amount earned for those with earnings	8.0 Percent	Yes
2. Did the demonstration affect AFDC participation?		
Average Per-Case Benefits	-6.3 Percent	Yes
Exits	5.2 Percent	Yes
Recidivism	-1.58 Percent	No
Subsidized Child Care		
Probability that SCC was received	-2.4 Percent	Yes
Amount of SCC for those who received it	11.6 Percent	No
Sanction	6.6 Percent	Yes

Source: CSHR analysis of HDHS administrative data.

Experimental members also decreased their dependence on AFDC during the period of study. They experienced a 6.3 percent net decrease in their average AFDC benefits and left the rolls at significantly higher rates than control group members. However, the experiment had no significant effect on rates of AFDC recidivism, primarily due to the small sample size of persons returning to AFDC during this period. As expected, a significantly higher percentage of JOBS WORKS! participants received sanctions for non-participation. This occurred because experimental group members were required to participate in job search activities while most control group members were merely waiting to be served with no participation obligations. Child care usage was quite small for both groups, ranging from 4-6 percent of total AFDC recipients. Experimental group members used significantly less child care than control group members. These reasons for this finding are unclear.

In conclusion, the JOBS WORKS! demonstration achieved most of its major objectives for early participants in the program. Although these early impacts are very positive, the shortened period of this evaluation only allowed impacts to be measured for

twenty-one months after assignment to an experimental or control group. Thus, it is not possible to predict whether these findings will hold up for a longer period of time for these participants or whether similar positive results will occur for later groups of participants. Even so, this approach shows great promise for its current status as one component of the Hawaii JOBS program.

Introduction

Background

The State of Hawaii received an 1115 waiver from the U.S. Department of Health and Human Services in 1994 to implement the Creating Work Opportunities for JOBS Clients Project. This initiative, which later became known as JOBS WORKS!, permitted Hawaii to:

- Lift the 8-week federal limitations on upfront job search
- Operate the waiver on less than a statewide basis
- Require 18 hours of work from participants, and
- Secure additional matched federal funds to implement the waiver.

The JOBS WORKS! waiver demonstration project was inspired by a legislative audit critical of the Hawaii JOBS program and increased consensus among the Governor, legislators and administrators to place a greater emphasis on work than was found in the earlier JOBS program. JOBS WORKS! was intended to emphasize immediate job search and job readiness activities for non-exempt and volunteer JOBS-eligibles who were called in for services. The waiver was designed to expand participation and made labor force attachment, rather than human capital development, the centerpiece of the program. The demonstration was intended to quickly engage participants in work while they were waiting for more intensive JOBS education and training activities. The pilot operated on the island of Oahu from January, 1995 through December 1996. The waiver features have since been incorporated into the state JOBS model as the First-to Work project and working has become a systemwide pre-requisite for education and training.

The JOBS WORKS! program had several objectives

- To increase employment opportunities for clients on JOBS waiting lists
- To provide work experience that may enhance client capacity for self-sufficiency
- To reduce federal and state costs of AFDC grants due to increased client earnings
- To provide a viable workforce for private sector employers
- To improve public/private partnerships in workforce development

The Hawaii Department of Human Services (HDHS) contracted with the Center for the Study of Human Resources at the University of Texas at Austin (CSHR) to conduct an impact evaluation of the JOBS WORKS! demonstration. Results from this evaluation are summarized in this report.

Objectives of the Research

The overall goal of the research was to study the JOBS WORKS! process and statistical data related to the project and the outcomes for individuals to determine whether the project accomplished the goals it was intended to accomplish. The hypothesized goals of the project, as set forth in the waiver request, are:

- Hypothesis A: The increased employment opportunity will result in a significant number of JOBS participants going to work while they wait for education and training, rather than being inactive.
- Hypothesis B: The work experience gained by participants in the demonstration will correlate positively with increased measures of success in completing education and training activities and should result in the acquisition of employment positions that are more likely to lead to self-sufficiency.
- Hypothesis C: The result of JOBS participants working while they are waiting for education and training is that the overall cost of AFDC will decrease due to grant reductions that are adjusted based on the earnings of the participants.
- Hypothesis D: Implementation of this demonstration will provide a viable, entry-level workforce for many Oahu employers.
- Hypothesis E: The implementation of the demonstration will help to forge a better partnership between business and government that will facilitate welfare-to-work programs.

Research Questions to be Answered

The goals of the research were tested by subjecting the following research questions to statistical analysis. The research questions represent concrete and measurable manifestations of the underlying goals, which tend to be more abstract and not directly measurable.

1. Does the demonstration promote self-sufficiency? Outcomes to be studied include:

   - Employment rates—For all study participants, did individuals in the experimental group have a higher probability of being employed than those in the control group?

   - Length of employment—For those employed, did individuals in the experimental group have a longer average length of employment than those in the control group?

   - Earnings—For those employed, did individuals in the experimental group have a higher level of earnings than those in the control group?

   - Total family income—For all study participants, did the families of the individuals in the experimental group have larger total family incomes than those in the control group?

2. Does the demonstration affect AFDC participation? Outcomes to be studied include:

   - Incidence of AFDC benefit receipt—Was the average per-case level of AFDC benefits paid to the experimental group lower than the level for the control group?

   - Exit rate from AFDC—Did individuals in the experimental group have a higher probability of exiting AFDC than individuals in the control group?

   - Recidivism rate for exiters—For individuals who exited AFDC, was the probability of returning to the rolls lower for former members of the experimental group than for former members of the control group?

   - Use of child care—For all participants, did members of the experimental group have a higher probability of utilization of child care than members of the control group? For all participants who became employed, was this also the case?

   - Sanction rates—or all participants, was the sanction rate significantly different between the experimental and control groups?

Experimental Design

The waiver was designed as a randomized experiment. Individuals were randomly assigned either to an experimental group which received the experimental treatment or a control group which received the same treatment as the island's regular JOBS population.

Periodically during the duration of the study period, a stratified sample of individuals was drawn from the population of JOBS-eligible AFDC clients who were not already active in JOBS. The individuals in the sample were assigned to the experimental or control groups based on a random number generated by a computer program. The sample was stratified so that 65 percent of the sample would be JOBS target group members, 30% would be JOBS-eligible, but not in a target group, and 5% of the sample would be JOBS-exempt volunteers. After drawing the sample, lists of the selected individuals were sent to the JOBS WORKS! staff. For the first year of the experiment, samples were drawn monthly, but in the second year, only three samples were drawn. The reduction in sampling during the second half of the experiment occurred primarily because intake went slower than expected and because the size of the samples drawn was increased.

Since the waiver was designed as a randomized experiment, the impacts may be measured by observing the outcomes for the control and experimental groups for a specified amount of time after assignment, and attributing any differences between the groups to the effects of the experimental treatment. This approach, referred to as a "posttest-only control group design," was required as a condition of all §1115 waiver evaluations by the U.S. Department of Health and Human Services.[1] This design has been used for several major evaluations of welfare-to-work experiments across the U.S.

Statistical Methods Applied

The primary statistical tool used to analyze the differences in outcomes between the experimental and control group was two-sample tests for differences in means or proportions. For the analysis of categorical data (for example, employed versus not employed), the proportion in the category in the control group was compared the proportion in the category in the experimental group, and the difference between the two proportions, the estimated net effect, was subjected to a statistical test to determine if it was large enough that it was not likely due to chance. For continuous variables, (for example, the amount of AFDC benefits received), the mean of the variable for the control group was compared to the mean of the variable for the experimental group, and the

[1] Donald T. Campbell and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research*, Rand McNally College Publishing Company, Chicago, 1966

difference between the two means, the estimated net effect, was subjected to a statistical test to determine if it was large enough that it was not likely due to chance.

In addition to the basic two-sample difference tests, regressions were executed in which the experimental effect is measured by one of the estimated coefficients of the fitted regression equation. These net effect estimates have the advantage that they are adjusted for measurable demographic differences between the experimental and control groups, and they may be expected to be more precise. The adjusted net effect estimates from the regressions are the preferred estimates of the impact of the treatment.

Characteristics of the Research Sample

Table 1 shows the characteristics of the sample, tabulated separately for the control and experimental groups. Since this waiver was performed as a randomized experiment, the attributes of the experimental and control group should differ only by chance. The randomization scheme has been tested by comparing the attributes of the control and experimental groups at the point they entered the experiment. No differences between the mean attributes of the two groups should be noticeable. Table 1 shows the result of simple two-sample tests on the attributes of the experimental and control group subjects. The t-statistic is used to test the null hypothesis that there is no difference between the two groups. The table shows no significant differences between the two groups. This desirable outcome shows that the randomization produced comparable groups.

Table 1. Selected Characteristics of the Research Samples

Attribute	Mean for Experimental	Mean for Control	Difference	t-Statistic for Ho
Age at intake	32.820	33.058	-0.238	-1.125
English Proficient*	0.922	0.914	0.008	1.097
Highest Grade Completed	10.788	10.761	0.027	0.336
High School Graduate*	0.676	0.683	-0.007	-0.567
Male*	0.211	0.207	0.004	0.386
Married*	0.256	0.256	0.000	0.024
Never Married*	0.376	0.378	-0.002	-0.159
Not Primary Individual on Case*	0.050	0.054	-0.003	-0.613
United States Citizen*	0.919	0.914	0.005	0.722
Dollars of AFDC benefits received in period prior to selection	7063.543	7010.797	52.746	0.545
Employed in period before selection*	0.334	0.329	0.006	0.453
In a target group*	0.247	0.237	0.010	0.930
Volunteer*	0.475	0.465	0.010	0.930
Exempt waiting to volunteer*	0.047	0.049	-0.003	-0.509
Not Exempt, not in target group*	0.713	0.721	-0.007	-0.649
JOBS volunteer in target group*	0.240	0.230	0.010	0.946
Filipino ethnicity*	0.105	0.106	-0.002	-0.223
Hawaiian ethnicity*	0.275	0.277	-0.002	-0.195
Mixed race or ethnicity*	0.225	0.226	-0.001	-0.129
White race or ethnicity*	0.126	0.118	0.008	-0.129
Other race or ethnicity*	0.270	0.272	-0.002	-0.191

Source: CSHR analysis of HDHS administrative data.
Notes: (1) None of the differences were statistically significant at α=5% level.
(2) * Indicates dummy variable equal to one if individual has this attribute, zero otherwise.

Data Sources

The data used to evaluate this experiment came entirely from administrative records of HDHS and the Hawaii Department of Labor and Industrial Relations (DLIR). The HDHS data covered all welfare-related variables, such as AFDC benefits paid, exits and recidivism, sanctions, job search activities, child care, family income, demographic attributes of case head, and target group status. The DLIR data used in this evaluation included unemployment insurance (UI) wage information collected from employers'

quarterly UI tax returns. This data, used by DLIR to administer the unemployment insurance program, was used to estimate impacts for all employment-related outcomes.

Despite the best efforts of all concerned, some observations were tainted with missing data. For about 0.9 percent of the subjects data could not be completely retrieved from the administrative databases supplied by HDHS because no observation in the administrative database matched the client number of the individual on the JOBS WORKS! roll. These unreliable observations have been deleted from all statistical analysis.

Appendix A contains a detailed description of all variables analyzed, and the time periods for which data was collected.

The Treatment

,The JOBS WORKS! treatment involved up-front job search and job readiness activity for persons on the waiting list for the JOBS program, rather than the control group treatment of waiting for education and training to be provided through the regular JOBS program. Specific elements of the treatment included:

- *Job Search.* JOBS WORKS! clients participated in Job Search for 30 hours per week until they became employed 18 hours per week, or were closed or were transferred to the appropriate JOBS unit. Their hours of participation were calculated by formula. Under the formula, an interview with a potential employer counted as 6 hours, visits to employers counted for 3 hours, and mail/telephone contacts counted for 2 hours. Clients were expected to complete job search activity reports weekly and turn them in to their job developer. Actual hours per individual may be more or less than 30 hours per week. One of the provisions of the waiver exempted the members of the experimental group from the federal cap of a maximum of eight weeks of up -front job search.
- *Job Readiness/Ho'ala.* Clients were referred at staff discretion to a job-readiness seminar named Ho'ala. The 4-day, 27 hour seminar was delivered on-site by Work Hawaii staff. Clients were allowed a maximum of 90 minutes total absence or received no credit for the seminar. Reportedly there was a 50% attrition rate between referral and attendance and an 85% completion rate thereafter.[2] The first Ho'ala for JOBS WORKS! occurred in March 1995. The JOBS WORKS! Ho'ala was a shortened version of the 3-week, 72 hour seminar given to regular JOBS clients at the time.

[2] Conversations between CSHR process analysis team and Work Hawaii staff.

- *Subsidized Child Care.* Subsidized child care was provided for JOBS WORKS! clients who were participating in job search, job readiness, and employment. Approximately 5-10% of the active JOBS WORKS! caseload was eligible for child care, however not all eligible clients actually received child care. Authorization of funding for a client's child care was controlled by the client's job developer. The clients themselves were responsible for finding commercial child care or making arrangements with family members. Payments of up to $325 per month per child were made directly to client.
- *Transportation Reimbursements.* Bus tokens or cash reimbursement for transportation expenses were issued or authorized by the client's job developers on a case-by-case basis.

Activities of Experimental and Control Groups

Figure 1 and Figure 2 show the caseload of experimental and control subjects in JOBS activities over the course of the experiment. The figures require some explaining, since they assign each individual into only one activity per month, even though most individuals had more than one activity in a month. For the purposes of the figures, the activities were aggregated and assigned an hierarchical rank. Individuals who participated in more than one of the aggregate activities in a month were assigned to the activity with the highest rank. The aggregation and ranking scheme is summarized in Table 2.

Table 2. Aggregation Scheme and Hierarchical Ranks for Aggregated Activities

Aggregated Activity	Abbreviation in Figure 1 and Figure 2	HANA Activity Codes Included	Hierarchical Rank
Education	EDU	2,3,4,5,6	7
Employment	JOB	1C, 1D, 1E, 1F	6
Job Search	JBS	10, 7A	4
Intake	INT	21,22,23,9,24,25,26,27,28	5
Conciliation	CON	41,42,43,44,45,46	3
Sanction	SAN	29	2
Other	OTH	All activities not specified for higher ranking aggregates.	1

Source: CSHR analysis of HDHS administrative data.

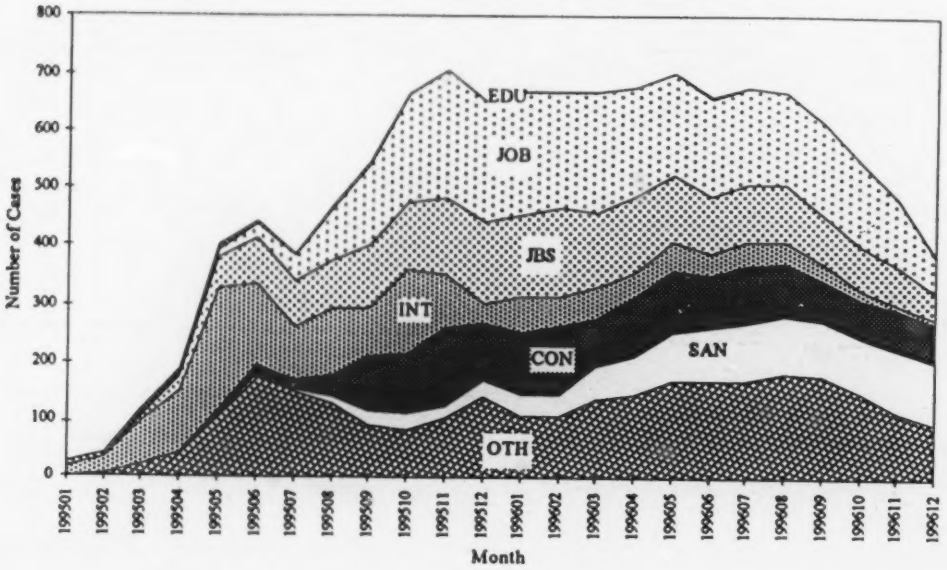
While the experimental JOBS caseload reached over six hundred clients for several months, control group members enrolled in the regular jobs program never

exceeded 32 clients. At the beginning of the experiment, experimental clients were primarily engaged in intake and job search, as expected. As the experiment proceeded, the intake activity became less important as fewer individuals were outreached. Many experimental clients found jobs, thus increasing the employment activity. A substantial proportion of the experimental population failed to meet requirements, and induced an increase in the sanction and conciliation activities. Almost nobody in the experimental group engaged in education activities.[3]

As expected, the control caseload and their activities differed substantially from that of the experimental group. Whereas the experimental caseload enrolled in JOBS WORKS! rose to the six-hundred per month level, average monthly JOBS participation for control group members never exceeded 32. In the beginning of the experiment, more than half of the control group members enrolled in JOBS participated in education activities, and their only other activities were intake and other. As the experiment progressed, the share of the education caseload declines, and employment, job search, sanction and conciliation begin to appear. These changes in activities observed can probably be attributed to changes in the emphasis of the JOBS program that began in the second half of 1995. By the end of the period, the activities of the control group appear very similar to the activities of the experimental group, except for much lower sanction and conciliation rates for control group members.

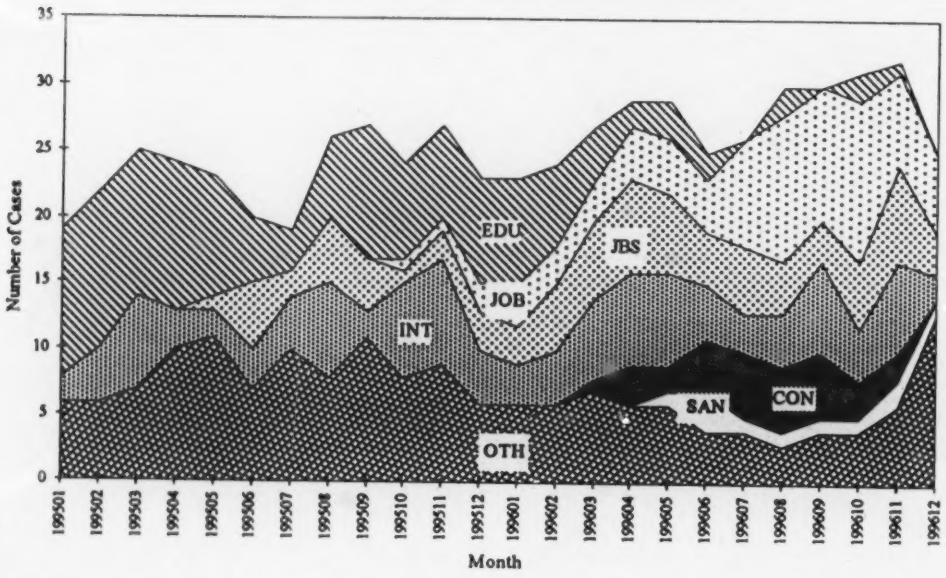
[3] The largest caseload in educational activities was eight, which occurred in the earlier months of the experiment. After July, 1995, the experimental group caseload in educational activities never exceeded two clients.

Figure 1. Experimental Group Caseload by Activity



Source: CSHR tabulation of HDHS administrative data.

Figure 2. Control Group Caseload by Activity



Source: CSHR tabulation of HDHS administrative data.

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Timing of Treatments

The main purpose of the experiment was to test whether outcomes are affected by having future JOBS participants execute job search activities immediately rather than waiting for openings in education and training activities. Accordingly, if the experiment is being conducted as described, one should observe members of the experimental group receiving JOBS activities immediately after being selected into the JOBS WORKS! list, whereas members of the control group should have a longer delay between selection and activities.

Table 3 shows the lag between random assignment and first observed JOBS activity for the two groups. As may be observed from the table, in the beginning of the experiment, up to September, 1995, most of the experimental group received treatment within 60 days of random assignment, whereas the delay is much longer for the control group, and most control group members received no activities at all. However, from October 1995 onward, it becomes progressively more difficult to discern a pattern of difference in lag between the two groups. At least three factors contributed to this change. First, the backlog began to build as the job search resources became fully utilized. Since fewer new clients could be handled, fewer were called in. Second, as the experiment progressed, more and more resources had to be expended on sanction and conciliation, reducing the amount that could be spent on more productive activities. Third, to conserve computational resources, it was decided to draw larger samples at less frequent intervals. The original design of the experiment dictated the size of samples to be drawn to be based on the availability of JOBS WORKS! staff. If this dictate had been followed, the drawings in 1996 would have consisted of much smaller monthly samples. The policy of drawing larger samples at less frequent intervals and the filling up of available slots as the program reached its capacity caused a longer period of time to pass between random assignment and first activity.

Stimulated by a legislative audit critical of the Hawaii JOBS program and increased consensus among the governor, legislators and administrators, structural changes in the state's JOBS program in particular began in mid 1995 and affected the experiment from then on. The emphasis of the state's welfare system changed from a long-term educational and training approach to an approach that had a greater emphasis on work. This change was accompanied by a decrease in funding and a concomitant

reduction in force (RIF) at both HDHS and DLIR, including personnel at the unit involved in the experiment. The RIF caused increased turnover, bumping, and employee stress that may have contributed to limited case manager capacity.

Because of these unintentional changes in the operation of the experiment, after October 1995 the group that was supposed to be doing job search rather than waiting for education and training was simply waiting for job search rather than waiting for education and training. Thus, CSHR researchers decided to divide the experiment into two periods. The first began in January 1995 and ran to September 1995, when the experiment was operating as planned, while the second began in October 1995 and ran to the end of the experiment. The statistics designed to measure the net experimental effect were executed on the shortened sample, because the observations from the shortened sample are more representative of the original intent of the experiment. To include observations from the less representative sample period would tend to dilute the estimated net effect of the experiment, because the persons in the experimental group were less likely to receive experimental treatment.

A further advantage of limiting the analysis to the individuals selected between January 1995 and September 1995 is that this approach permits a longer time period to observe outcomes. The disadvantage of dropping all subjects randomized after September 1995 is that the sample size is decreased. Of the total 6,158 individuals with complete observations, 3,294 of them (53.5 percent) were included in the impact analysis.

Table 3. Time Lag from Date of Selection to Date of First JOBS Activity

Experimental Group

Date of Selection	Number Selected	Lag in Days from Selection to First Activity												Percent Active within 59 days	Percent never active
		0 to 29	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to 209	210 to 239	240 to 269	270 to 299	300 or More	No Activity		
199501	66	19	17	6	0	0	0	1	0	0	0	1	22	55%	33%
199502	44	24	15	1	0	0	0	0	0	0	0	0	4	89%	9%
199503	121	66	23	2	1	1	0	0	0	1	0	1	26	74%	21%
199504	241	104	92	4	0	0	0	1	0	0	0	2	38	81%	16%
199505	301	155	101	3	4	2	0	0	0	0	0	4	32	85%	11%
199506	121	54	36	4	2	0	0	0	0	0	0	1	24	74%	20%
199507	131	35	70	2	1	1	0	0	0	0	0	0	22	80%	17%
199508	300	85	131	8	3	2	1	0	4	3	1	17	45	72%	15%
199509	350	81	155	6	0	1	0	0	0	1	2	3	101	67%	29%
199510	300	43	56	39	85	9	0	0	0	0	0	1	67	33%	22%
199511	351	4	1	15	53	101	54	40	2	0	2	4	75	1%	21%
199512	351	9	13	7	6	1	3	55	40	62	19	5	131	6%	37%
199601	130	13	8	5	4	7	7	4	21	8	0	8	45	16%	35%
199607	201	13	10	2	4	1	4	1	7	5	3	3	148	11%	74%
199610	121	5	5	3	6	6	0	4	6	0	0	0	86	8%	71%

Control Group

Date of Selection	Number Selected	Lag in Days from Selection to First Activity												Percent Active within 59 days	Percent never active
		0 to 29	30 to 59	60 to 89	90 to 119	120 to 149	150 to 179	180 to 209	210 to 239	240 to 269	270 to 299	300 or More	No Activity		
199501	67	2	3	0	1	0	1	0	1	1	1	12	45	7%	67%
199502	41	4	2	4	1	0	1	0	0	1	0	6	22	15%	54%
199503	124	13	8	6	5	4	4	5	4	5	2	11	57	17%	46%
199504	234	5	2	0	5	7	3	6	4	7	6	36	153	3%	65%
199505	301	1	8	5	10	2	5	4	5	3	6	55	197	3%	65%
199506	111	2	1	2	2	2	1	3	3	1	2	20	72	3%	65%
199507	112	6	7	2	1	6	3	9	5	1	2	6	64	12%	57%
199508	298	28	23	12	5	8	6	11	4	5	5	34	157	17%	53%
199509	350	0	3	6	4	2	6	8	5	5	4	55	252	1%	72%
199510	300	8	4	4	1	3	0	7	5	6	5	30	227	4%	76%
199511	353	2	8	4	2	4	5	3	10	10	7	45	253	3%	72%
199512	344	9	10	12	6	8	8	8	9	3	7	34	230	6%	67%
199601	127	19	7	4	5	5	3	2	3	0	1	11	67	20%	53%
199607	199	11	10	6	2	4	5	3	5	3	2	1	147	11%	74%
199610	122	6	3	3	2	6	5	4	1	0	0	0	92	7%	75%

Source: CSHR analysis of HDHS administrative data.

Impacts of the JOBS WORKS! Program

Probability of Employment

The results of a tabulation of the employment status of the experimental and control groups are shown in Table 4. The tabulation is based on whether the individual was employed within 21 months after being selected and randomly assigned to either the experimental or control groups.

Table 4. Employment Status for Experimental and Control Groups

	Employed after Selection	Total Number of Subjects
Experimental Group		
Number of Subjects	901	1662
Percent of Group	54.21%	100.00%
Control Group		
Number of Subjects	794	1632
Percent of Group	48.65%	100.00%
Unadjusted Net Experimental Effect	5.56%***	
Adjusted Net Experimental Effect (from Regression Analysis)	4.49%***	

Source: CSHR Estimates based on UI wage data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Of the experimental group, 54.21 percent found employment, whereas only 48.65 percent of the control group found employment. Thus, the experimental treatment had a 5.56 (=54.21-48.65) percent positive net unadjusted effect on employment. The adjusted effect, which is adjusted by regression methods for the slight demographic differences between the control and experimental groups is 4.49 percent.[4] Both estimates of the net effect are statistically significant.

This positive net effect was one of the expected outcomes of the experiment. It shows that for early participants in the JOBS WORKS! program, the work emphasis of the treatment resulted in higher rates of employment in the first 21 months after assignment to experimental or control groups.

[4] See Appendix A for an explanation of the methods used to produce adjusted net effect estimates by regression.

Length of Employment

Table 5 shows the unadjusted and adjusted net effects of the treatment on the length of employment for those who became employed.[5] The average length of employment for all subjects (experimental and control) was just over 12 months out of a possible twenty-one. The statistically significant net experimental effects show that the treatment induced an approximate ten percent positive change in the length of employment for those who became employed. This positive net effect on length of employment, together with the earlier result showing that the treatment induced a higher probability of employment, was one of the expected outcomes of the experiment.

Table 5. Experimental Effects on Length of Employment

Mean Length of Employment for Employed Members of Experimental Group	12.73
Mean Length of Employment for Employed Members of Control Group	11.50
Unadjusted Net Experimental Effect	1.23***
Adjusted Net Experimental Effect (from Regression Analysis)	1.33***

Source: CSHR Estimates based on UI wage data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Earnings

Table 6 shows the result of the statistical analysis performed to analyze the effect of the treatment on the amount earned by the experimental subjects who obtained employment. The earnings reported in the table are averaged over a 21 month period following random assignment. During this period JOBS WORKS! participants earned an average of $1,285 more than control group members, an increase of almost 15 percent. The adjusted net effect is even larger. After adjusting for the small preexisting differences between the experimental and control group, the estimate of the earnings

[5] See Appendix A for an explanation of why the sample analyzed for this part of the analysis is limited to individuals who became employed.

difference of the experimental group over the control group increases to almost thirty percent. Both the unadjusted and adjusted net effects are statistically significant.

Table 6. Experimental Effects on Earnings

Mean Earnings for Employed Members of Experimental Group	$9479.28
Mean Earnings for Employed Members of Control Group	$8194.18
Unadjusted Net Experimental Effect	$1285.10***
Unadjusted Net Experimental Effect as a Percent	14.48%***
Adjusted Net Experimental Effect (from Regression Analysis)	28.50%***

Source: CSHR Estimates based on UI wage data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Family Income

Unlike the earnings data which was obtained from the UI wage files, family income data was extracted from HDHS administrative data files. Since the family income data is gathered for entire families, it had to be matched to the individual-level JOBS WORKS! roster using case numbers.[6] Table 7 shows the experimental effect on the probability of having family income. Since more than 90 percent of the families had *some* income, it is not surprising that the difference between the experimental and control groups in this measure is insignificant. It is much more interesting to note the result reported in Table 8, in which estimates are displayed showing a statistically significant increase in family income of eight percent, for those families that had income. This increase in income was one of the more important outcomes expected from the treatment.

[6] During this matching process, it was discovered that in some cases, experimental group members were part of the same case as control group members. These "contaminated" cases were dropped from the family income analysis because it is not possible to unambiguously assign the family income to the control group or the experimental group.

Table 7. Experimental Effects on Probability of Having Family Income

	Had Family Income after Selection	Total Number of Subjects
Experimental Group		
Number of Subjects	1516	1637
Percent of Group	92.61%	
Control Group		
Number of Subjects	1483	1607
Percent of Group	92.28%	
Unadjusted Net Experimental Effect	0.32%	
Adjusted Net Experimental Effect (from Regression Analysis)	0.04%	

Source: CSHR Estimates based on HDHS administrative data.
Note: The estimated experimental effects were not statistically significant.

Table 8. Experimental Effects on Amount of Family Income

	Mean Total Family Income for 21 Months after Selection
All Subjects with Income	$17,326
Experimental Group	$18,268
Control Group	$16,361
Unadjusted Net Effect	$1,907
Unadjusted Net Effect as a Percent	11.01%***
Adjusted Net Experimental Effect (from Regression Analysis)	8.00%***

Source: CSHR Estimates based on HDHS administrative data.
Note: *** indicates effects are statistically significant at α=0.01 level.

AFDC Benefits Paid

Table 9 shows the net experimental effect on amount of AFDC benefits received for a 21 month period after random selection. The statistically significant 6.3 percent decrease in AFDC benefits paid, was of the expected outcomes of the experiment, was brought about by two factors. First, as reported in the next section of this document, the experimental group achieved a higher exit rate than the control group, and those who left the rolls received AFDC benefits for fewer periods than those who stayed. Second,

because earnings offset AFDC benefits, the larger earnings of the experimental group tended to reduce the AFDC benefits they received.

Table 9. Experimental Effects on Total AFDC Benefit Receipt

	Mean Total AFDC Benefits Received for 21 Months after Selection
All Subjects	$11,150
Experimental Group	$10,810
Control Group	$11,497
Unadjusted Net Effect	-$687
Unadjusted Net Effect as a Percent	-6.16%***
Adjusted Net Experimental Effect (from Regression Analysis)	-6.30%***

Source: CSHR analysis of HDHS administrative data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Exits

Table 10 shows the net effects of the experiment on the probability of exiting AFDC. The probability of exit was significantly higher among the members of the experimental group. Exits were defined as having occurred if the individual left the welfare rolls for more than 45 consecutive days within 21 months of being randomly assigned. Exits that were followed by a return to the rolls within 45 days were not considered because they are not deemed an indicator of self-sufficiency.[7]

The net effect of the experiment on exits is both positive and statistically significant. The magnitude of the coefficient suggests that experimental group members were about 5.2 percent more likely to exit than their control group counterparts, other things equal.

[7] Short periods off the rolls usually result from failure to submit administrative paperwork in a timely rather than being caused by significant improvements in a client's ability to keep and hold a job.

Table 10. Net Experimental Effect for Probability of Exit from AFDC

	Exited after Selection	Total Number of Subjects
Experimental Group		
Number of Subjects	860	1662
Percent of Group	51.7%	100.0%
Control Group		
Number of Subjects	759	1632
Percent of Group	46.5%	100.0%
Unadjusted Net Experimental Effect	5.2%***	
Adjusted Net Experimental Effect (from Regression Analysis)	5.2%***	

Source: CSHR analysis of HDHS administrative data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Recidivism

Table 11 shows whether experimental group members who exited from AFDC returned to the rolls in smaller numbers than control group members who exited. In order to be counted, the return to the rolls had to occur within 21 months of the individual's random assignment. The regression is applied only to individuals who exited from AFDC. The negative 1.58 percent adjusted net effect is in the expected direction, but it is statistically insignificant so the treatment cannot be said to reduce recidivism for those who exit.

Table 11. Net Experimental Effect for Recidivism

	Retired after Exit	Total Number of Subjects Who Exited
Experimental Group		
Number of Subjects	261	860
Percent of Group	30.35%	100.00%
Control Group		
Number of Subjects	241	759
Percent of Group	31.75%	100.00%
Unadjusted Net Experimental Effect	-1.40%***	
Adjusted Net Experimental Effect (from Regression Analysis)	-1.58%***	

Source: CSHR analysis of HDHS administrative data.
Note: Neither effect is statistically significant.

Utilization of Subsidized Child Care

Table 12 shows the result of an analysis of the probability of use of subsidized child care. Due to limitations on the data collection period for subsidized child care, the analysis is based on a fifteen month follow-up period after the date of randomization. The experimental group's use of child care was expected to increase because their higher employment rates. However, Table 12 shows a negative and significant experimental effect for child care receipt of 2.4 percent. This unexpected outcome may be explained by referring to Table 13, which shows how many individuals used child care, and how much they used, broken out by whether the individual was in the experimental or control group, and whether the individual was employed or participated in an education activity during the child care follow-up period. As expected, most of the subsidized child care was provided to individuals who were employed. However, for reasons that are not clear, only 7 percent of the employed experimental group members received subsidized child care compared to 11 percent of the employed control group members. This difference in the proportion of employed subjects receiving subsidized child care explains how the experimental group could have a higher level of employment, but a lower probability of receiving subsidized child care.

Table 12. Net Experimental Effect for Use of Subsidized Child Care

	Received Subsidized Child Care after Selection	Total Number of Subjects
Experimental Group		
Number of Subjects	73	1662
Percent of Group	4.39%	
Control Group		
Number of Subjects	107	1632
Percent of Group	6.56%	
Unadjusted Net Experimental Effect	-2.16%***	
Adjusted Net Experimental Effect (from Regression Analysis)	-2.43%***	

Source: CSHR analysis of HDHS administrative data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Table 13. Detailed Tabulation of Use of Subsidized Child Care

Experimental or Control	Employed within 15 Months of Selection	In Educ. Act. within 15 Months of Selection	Number of Cases	Number of cases using SCC	Percent of cases using SCC	Average Duration of Subsidy (Days)	Subsidy Per Case	Total Child Care Subsidy
Control	No	No	904	25	3%	184	$1,071	$26,782
Control	No	Yes	6	2	33%	272	$1,417	$2,833
Control	Yes	No	717	78	11%	205	$1,504	$117,332
Control	Yes	Yes	5	2	40%	422	$7,768	$15,536
Experimental	No	No	828	15	2%	228	$2,261	$33,911
Experimental	No	Yes	0	0	0%	-	-	$0
Experimental	Yes	No	830	57	7%	193	$1,532	$87,303
Experimental	Yes	Yes	4	1	25%	302	$3,112	$3,112

Source: CSHR analysis of HDHS administrative data.

Table 14 completes the analysis for subsidized child care. Since only 5.5 percent of the subjects received subsidized child care, the number of observations available for this analysis is only 180. The average subsidy for experimental group members was $185 larger than for control group members. However, because of this small sample size, the estimates of the experimental effect are insignificant.

Table 14. Net Effect on Amount of Child Care Received

	Number of Cases	Average Child Care Subsidy Per Case
All Subjects with Child Care	180	$1,593
Experimental Group	107	$1,703
Control Group	73	$1,519
Unadjusted Net Effect		$185
Unadjusted Net Effect as a Percent		11.58%
Adjusted Net Experimental Effect (from Regression Analysis)		$115
Adjusted Net Effect as a Percent		7.24%

Source: CSHR analysis of HDHS administrative data.
Note: Effect estimates were not statistically significant.

Sanction Rate

Sanctions imposed are recorded in the HAWI client file. The analysis was designed to determine whether members of experimental group had a higher probability of being sanctioned than members of the control group. As shown in Table 15, the estimated experimental effect is a positive and statistically significant 6.6 percent. This outcome may be attributed to the greater participation requirements imposed on the experimental group. Since the members of the control group were required to participate in fewer activities (most of them had no participation at all), they were not as much at risk for sanction for non-compliance with activity requirements, and therefore received fewer sanctions.

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Table 15. Experimental Effects on Probability of Sanction

	Received Sanctions within 21 Months of Assignment	Number of Subjects
Experimental Group		
Number of Subjects	193	1662
Percent of Group	11.61%	100.00%
Control Group		
Number of Subjects	79	1632
Percent of Group	4.84%	100.00%
Unadjusted Net Experimental Effect	6.77%***	
Adjusted Net Experimental Effect (from Regression Analysis)	6.59%***	

Source: CSHR analysis of HDHS administrative data.
Note: *** indicates effects are statistically significant at α=0.01 level.

Summary of Key Findings

Differences in impacts between the experimental and control groups were calculated to judge the influence of JOBS WORKS! on participants' self-sufficiency and AFDC participation. Specific self-sufficiency measures included: employment rates, length of employment, amount of total earnings, and total family income. AFDC measures included: average amount of AFDC benefits per case, AFDC exit and recidivism rates, use of subsidized child care, and rates at which persons were sanctioned for failing to comply with program requirements.

Table 16 summarizes the results of these calculations. Taken together, these results indicate that the JOBS WORKS! demonstration significantly improved self-sufficiency for its early participants and reduced these persons' dependence on AFDC. Rates of employment, length of employment, and total earnings were all significantly higher for experimental group members than control group members during the first twenty-one months after assignment. While the differences in total family income between the two groups were insignificant, this finding is not particularly meaningful because nearly every family in both groups had some income. Moreover, the amount of family income was significantly higher for experimental group members among those families with earned income.

Table 16. Summary of Findings

Research Question	Magnitude of estimated adjusted net effect	Was estimated effect statistically significant?
1. Did the demonstration promote self-sufficiency?		
Employment Rate	4.5 Percent	Yes
Length of Employment	1.33 Months	Yes
Earnings	28.5 Percent	Yes
Total Family Income		
Probability that family earned income	0.04 Percent	No
Amount earned for those with earnings	8.0 Percent	Yes
2. Did the demonstration affect AFDC participation?		
Average Per-Case Benefits	-6.3 Percent	Yes
Exits	5.2 Percent	Yes
Recidivism	-1.58 Percent	No
Subsidized Child Care		
Probability that SCC was received	-2.4 Percent	Yes
Amount of SCC for those who received it	11.6 Percent	No
Sanction	6.6 Percent	Yes

Source: CSHR analysis of HDHS administrative data.

Experimental members also decreased their dependence on AFDC during the period of study. They experienced a 6.3 percent net decrease in their average AFDC benefits and left the rolls at significantly higher rates than control group members. However, the experiment had no significant effect on rates of AFDC recidivism, primarily due to the small sample size of persons returning to AFDC during this period. As expected, a significantly higher percentage of JOBS WORKS! participants received sanctions for non-participation. This occurred because experimental group members were required to participate in job search activities while most control group members were merely waiting to be served with no participation obligations. Child care usage was quite small for both groups, ranging from 4-6 percent of total AFDC recipients. Experimental group members used significantly less child care than control group members. These reasons for this finding are unclear.

In conclusion, the JOBS WORKS! demonstration achieved most of its major objectives for early participants in the program. Although these early impacts are very positive, the shortened period of this evaluation only allowed impacts to be measured for

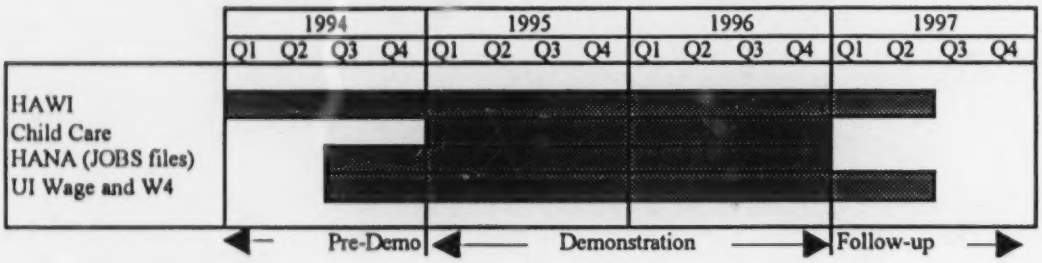
twenty-one months after assignment to an experimental or control group. Thus, it is not possible to predict whether these findings will hold up for a longer period of time for these participants or whether similar positive results will occur for later groups of participants. Even so, this approach shows great promise for its current status as one component of the Hawaii JOBS program.

Appendix A
Statistical Methods and Detailed Results

Data Sources

Table A-1 summarizes the data used for this analysis and shows the periods of time for which data from each source was available. The waiver started in January 1995 and ended in December 1996. In order to analyze long-term outcomes such as job retention and recidivism, it was necessary to collect data for a follow-up period after the end of the demonstration's completion date. In addition to data for the demonstration and follow up period, data for some variables during the pre-demonstration period was collected in order to verify that the attributes of the experimental and control groups were equivalent before the starting of the experiment.

Table A-1. Data Sources and Periods of Availability



HAWI Data

The HAWI data system contains most of the data needed to administer means-tested entitlement programs in Hawaii. It consists of five main files: a client file, a participation file, a benefits file, an income file and an address file. The client file provides demographic information such as age, race, educational attainment, and English language proficiency for clients. The participation file contains information on the dates of participation by clients in means-tested programs. The benefits file contains data on the amount of AFDC benefits paid to clients. The income file shows total family income attributed to each AFDC case at the time of application or re-certification for benefits. The address file shows current and past addresses for clients. CSHR received extractions from these files which covered all available records for all individuals in either the

experimental or control group in the waiver. This data source was used to provide information on duration, timing, and amount of AFDC benefits, AFDC exit rates, client and family demographics, and sanctions.

JOBS Data

Data for the JOBS program is collected in the HANA data system. These data include timing and amount of effort spent in JOBS component activities for participants in both regular JOBS and JOBS WORKS!. For individuals who have reported job entry, the HANA system also collects data on wages and duration of the employment.

Support Services Data

The research question regarding the use of child care as a support service was answered by analyzing data from the C^2C child care data system. Data provided by HDHS included the date and dollar amount of all reimbursement checks issued to members of the experimental and control groups

Employment and Earnings Data

The HANA system provides self-reported employment data for JOBS participants. However, since most members of the control group never entered the JOBS program, the employment data in the HANA file will not include employment for most members of the control group. Thus, the HANA employment data is biased toward showing better employment outcomes for the experimental group, and may not be used for analysis.[8]

Past research has shown that data from the Unemployment Insurance system administered by Hawaii Department of Labor and Industrial Relations (DLIR) has many potential advantages over self-reported employment data. The main advantage of the UI data is that it covers the control and experimental groups evenly. Any differences in employment observed from this source can be safely attributed to the experiment, rather

[8] Exploratory analysis of the hours and wage data contained in the HANA system was performed even though the data were known to be biased. While this analysis showed a strong effect on the probability of employment for the experimental group (a finding that is due to the bias) no particular differences in hours worked or wage rates were observed.

than to differences in data collection procedures. This data source also has the advantage of being available throughout the full period of the waiver, as well as during the pre-demonstration and follow-up periods. UI earnings and W4 (new hire) data from DLIR were merged with the HDHS data sources by SSN.

Given the many advantages of the UI earnings data, it is most regrettable that they contain only quarterly observations on earnings. The data do not contain exact start and end dates for the spells of employment, nor do they specify the number of hours worked or the wage rate. To facilitate computations, when analyzing the duration of employment we made the assumption that an individual was employed for all months contained in a quarter for which wages were reported. We further assumed that the reported quarterly wages were evenly divided between the months of the quarter. Hourly wage rates and hours of work may not be analyzed at all using UI earnings data since it reports only the total quarterly earnings, and not the number of hours worked or the wage rate. Because of this data gap, a part time placement at a high wage can not be differentiated from a full time placement at a lower wage.

JOBS WORKS! Administrative Records

In addition to the usual data available from HDHS administrative files, HDHS provided a complete roster of all members of both the experimental and control groups. This roster included variables indicating the group assignment of the subject and the date the subject was selected for the evaluation. Observations in this dataset were used to select and analyze data from all other datasets, based on client numbers, case numbers, and social security numbers, as appropriate.

Summary of Variables

Table A-2 summarizes the variables used in the analysis.

Table A-2. Summary of Variables Used

EXPRMT	Dummy variable equal to one if subject was in experimental group, zero if in control group.
HS	Dummy variable equal to one if subject has highest grade completed of 12 or larger.
MALE	Dummy variable equal to one if subject was male, zero if female.
CAT05	Dummy variable equal to one if subject was an exempt individual waiting to volunteer for JOBS, zero otherwise
CAT30	Dummy variable equal to one if subject was non-exempt not in a target group, zero otherwise
CAT65	Dummy variable equal to one if subject was a JOBS volunteer in a target group, zero otherwise
USCITZN	Dummy variable equal to one if subject was a U.S. citizen, zero otherwise.
FILIP	Dummy variable equal to one if subject was of Philippine ethnicity, zero otherwise.
HAWAIIN	Dummy variable equal to one if subject was of Hawaiian ethnicity, zero otherwise.
WHITE	Dummy variable equal to one if subject was of White ethnicity, zero otherwise.
MIXED	Dummy variable equal to one if subject was of Mixed ethnicity; zero otherwise.
GOOD_ENG	Dummy variable equal to one if subject claimed English proficiency, zero otherwise.
IN_TG	Dummy variable equal to one if subject was in a target group, zero otherwise.
MARRIED	Dummy variable equal to one if subject was married at time of selection, zero otherwise
NEVMAR	Dummy variable equal to one if subject had never been married at time of selection, zero otherwise
NOTPRIM	Dummy variable equal to one if subject was not the primary individual on the case and was not the spouse of the primary individual, zero otherwise.
VOLUNT	Dummy variable equal to one if subject was a volunteer for JOBS, zero otherwise
UI_EMPL	Dummy variable equal to one if subject was employed within twenty one months of being selected. Based on UI wage file, zero otherwise.
UI_WAGES	Amount of covered UI wages from employment within twenty one months of being selected, for subjects who were employed within twenty one months of being selected. Not defined if the person was not employed. Based on UI wage file.
PRE_EMPL	Amount of covered UI wages for the year prior to being selected. Based on UI wage file.
HASINC	Dummy variable equal to one if subject's family had positive income within twenty one months of being selected, zero otherwise. Defined only for individuals whose families were either not in the experiment or who were in the same group as subject. Not defined for subjects in families in which family members were in both experimental and control groups.
TOTINC	Amount of family income for individuals who had family income. Based on HAWI income file. Sum of all income found within 21 months of being selected.
LNINC	Natural logarithm of TOTINC
BEN	Amount of AFDC benefits received by subject's case for twenty one months after selection. Based on HAWI benefits file.
EXIT	Dummy variable equal to one if individual exited AFDC for more than 45 days within twenty one months of being selected, zero otherwise.
RECID	Dummy variable defined only for individuals who exited, equal to one if the individual exited and returned to the rolls within twenty one months of selection, zero otherwise.
CCUSED	Dummy variable equal to one if the individual received subsidized child care within fifteen months after being selected, zero otherwise.
TOTCC	Dollars of subsidy for child care received within fifteen months of selection
SANCED	Dummy variable equal to one if subject received a sanction within twenty one months of being selected, zero otherwise.

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Regression Analysis

Multiple regression was applied to measure the adjusted net effects of the experiment. Table A-3 summarizes the regression equations that were fitted to answer each research question. Tables A-4 through A-14 show the regression results.

Table A-3. Regression Models

Research Question	Dependent Variable	Universe
Did individuals in the experimental group have a higher probability of being employed than those in the control group?	Dummy variable, 1 if employed during or after induction, zero otherwise	All individuals in control or experimental groups
Did individuals in the experimental group have a longer average length of employment than those in the control group?	Average length of employment, or logarithm of average length of employment.	Employed individuals in control or experimental groups
Did individuals in the experimental group have a higher level of earnings than those in the control group?	Quarterly UI earnings or self-reported wage multiplied by self-reported hours from JOBS files, or the logarithm of these measures	Employed individuals in control or experimental groups
Did the families of the individuals in the experimental group have larger total family incomes than those in the control group?	Family income	Individuals in uncontaminated cases with family income
Was the average per-case level of benefits paid to the experimental group lower than the level for the control group?	Total case benefits paid for participant's case. (Pre/Post change in benefits per case)	All individuals in control or experimental groups
Did individuals in the experimental group have a higher probability of exiting AFDC than individuals in the control group?	Dummy variable, 1 if individual exits AFDC, zero otherwise	All individuals in control or experimental groups
Was the probability of returning to the rolls lower for former members of the experimental group than for former members of the control group?	Dummy variable, 1 if individual returns to AFDC within follow-up, zero otherwise	All individuals in control or experimental groups who exited.
Did members of the experimental group have a higher probability of utilization of child care than members of the control group?	Dummy variable, 1 if child care was used, zero otherwise. Also to be studied, total number of days of child care used.	Separate regressions for: (1) all individuals (2) Individuals that received subsidized child care
Was the sanction rate significantly different between the experimental and control groups?	Dummy variable, 1 if sanction was imposed during or after participation, zero otherwise.	All individuals in control or experimental groups.

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Table A-4. Probability of Employment

Regression Summary Statistics

Dependent Mean	0.51457
R-Squared	0.193
Number of observations:	3,294

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.4812	4.329
EXPRMT	0.0449	2.858
HS	0.0738	4.208
MALE	0.0218	0.966
AGE_I	-0.0064	-5.985
CAT05	-0.1720	-1.946
CAT30	-0.0493	-0.508
USCITZN	0.0253	0.78
FILIP	0.0490	1.68
HAWAIIN	0.0034	0.146
WHITE	0.0160	0.554
MIXED	0.0182	0.75
GOOD_ENG	0.0179	0.549
IN_TG	-0.0226	-0.237
MARRIED	0.0157	0.734
NEVMAR	-0.0074	-0.364
NOTPRIM	0.0303	0.767
VOLUNT	0.0647	3.915
PRE_EMPL	0.4151	24.011

Table A-5. Regression for Length of Employment for Subjects Who Found Employment

Regression Summary Statistics

Dependent Mean	12.15112
R-Squared	0.101
Number of observations:	1,694

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	3.5248	1.361
EXPRMT	1.3298	4.08
HS	0.8229	2.183
MALE	-1.1698	-2.542
AGE_I	0.0619	2.624
CAT05	2.3291	1.087
CAT30	2.8063	1.203
USCITZN	-0.1630	-0.223
FILIP	1.2614	2.168
HAWAIIN	-0.3401	-0.704
WHITE	-1.2036	-2.011
MIXED	0.5541	1.11
GOOD_ENG	0.5666	0.78
IN_TG	2.9348	1.273
MARRIED	0.8078	1.805
NEVMAR	0.3843	0.913
NOTPRIM	0.8998	1.208
VOLUNT	0.1666	0.495
PRE_EMPL	3.7681	11.399

Table A-6. Regression for Log of UI Wages for Subjects Who Found Employment

Regression Summary Statistics

Dependent Mean	8.21858
R-Squared	0.068
Number of observations:	1,694

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	6.2283	9.861
EXPRMT	0.2507	3.154
HS	0.3710	4.036
MALE	0.2064	1.839
AGE_I	0.0087	1.512
CAT05	0.6937	1.328
CAT30	0.8371	1.471
USCITZN	-0.1919	-1.075
FILIP	0.3035	2.139
HAWAIIN	-0.0253	-0.214
WHITE	-0.1190	-0.815
MIXED	0.1825	1.498
GOOD_ENG	0.2732	1.542
IN_TG	0.8391	1.493
MARRIED	0.1113	1.02
NEVMAR	-0.0813	-0.792
NOTPRIM	0.0901	0.496
VOLUNT	0.0252	0.307
PRE_EMPL	0.5518	6.844

Table A-7. Regression for Presence of Family Income

Regression Summary Statistics

Dependent Mean	0.92448
R-Squared	0.131
Number of observations:	3,244

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.9647	15.598
EXPRMT	0.0004	0.05
HS	-0.0086	-0.893
MALE	-0.1353	-10.82
AGE_I	0.0000	-0.074
CAT05	-0.0194	-0.392
CAT30	-0.0194	-0.358
USCITZN	0.0603	3.338
FILIP	0.0121	0.753
HAWAIIN	0.0120	0.933
WHITE	-0.0237	-1.481
MIXED	0.0020	0.146
GOOD_ENG	-0.0181	-0.999
IN_TG	-0.0135	-0.255
MARRIED	-0.0761	-6.4
NEVMAR	-0.0085	-0.762
NOTPRIM	-0.1883	-8.517
VOLUNT	0.0088	0.962

Table A-8. Regression for Logarithm of Family Income for Those Who Had Family Income

Regression Summary Statistics

Dependent Mean	9.47524
R-Squared	0.050
Number of observations:	2,999

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	9.1211	40.193
EXPRMT	0.0770	2.376
HS	0.0594	1.651
MALE	-0.2867	-5.924
AGE_I	0.0046	2.043
CAT05	0.1900	1.053
CAT30	0.0267	0.135
USCITZN	0.1712	2.492
FILIP	0.0471	0.789
HAWAIIN	0.0727	1.524
WHITE	-0.0975	-1.638
MIXED	0.0394	0.788
GOOD_ENG	-0.0006	-0.009
IN_TG	0.0372	0.191
MARRIED	0.0371	0.832
NEVMAR	-0.0739	-1.817
NOTPRIM	-0.5559	-5.877
VOLUNT	-0.0101	-0.296

Table A-9. Regression for Amount of AFDC Benefits Received

Regression Summary Statistics

Dependent Mean	11,150
R-Squared	0.036
Number of observations:	3,244

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	11075.0000	6.778
EXPRMT	-702.3470	-3.057
HS	1091.1851	-4.268
MALE	-400.4039	-1.212
AGE_I	26.7739	1.691
CAT05	897.1012	0.687
CAT30	-934.7935	-0.654
USCITZN	1557.9761	3.264
FILIP	1149.4876	-2.711
HAWAIIN	851.6686	2.51
WHITE	-955.5805	-2.263
MIXED	-163.7751	-0.461
GOOD_ENG	-806.7504	-1.689
IN_TG	-451.4417	-0.321
MARRIED	1185.1990	3.775
NEVMAR	-185.9624	-0.633
NOTPRIM	1604.0978	2.746
VOLUNT	227.4419	0.942

Table A-10. Regression for AFDC Exits

Regression Summary Statistics

Dependent Mean	0.4915
R-Squared	0.044
Number of observations:	3,294

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.6495	5.37
EXPRMT	0.0521	3.043
HS	0.0526	2.76
MALE	0.1159	4.737
AGE_I	-0.0040	-3.418
CAT05	-0.1452	-1.509
CAT30	-0.0615	-0.582
USCITZN	-0.1198	-3.395
FILIP	0.0544	1.716
HAWAIIN	-0.0732	-2.899
WHITE	0.0290	0.921
MIXED	-0.0068	-0.257
GOOD_ENG	0.0977	2.752
IN_TG	-0.0558	-0.537
MARRIED	-0.0184	-0.791
NEVMAR	-0.0833	-3.792
NOTPRIM	0.1505	3.493
VOLUNT	0.0245	1.361

Table A-11. Regression for Recidivism for Those Who Exited

Regression Summary Statistics

Dependent Mean	0.31007
R-Squared	0.027
Number of observations:	1,619

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.0569	0.31
EXPRMT	-0.0158	-0.691
HS	0.0147	0.562
MALE	-0.0005	-0.016
AGE_I	-0.0056	-3.635
CAT05	0.3304	2.128
CAT30	0.3766	2.243
USCITZN	0.0739	1.662
FILIP	0.0350	0.878
HAWAIIN	0.0457	1.332
WHITE	0.0047	0.115
MIXED	0.0038	0.109
GOOD_ENG	-0.0585	-1.197
IN_TG	0.3861	2.328
MARRIED	0.0934	3.104
NEVMAR	-0.0295	-0.988
NOTPRIM	-0.0474	-0.937
VOLUNT	0.0227	0.949

Table A-12. Regression for Whether Client Received Child Care

Regression Summary Statistics

Dependent Mean	0.05464
R-Squared	0.041
Number of observations:	3,294

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.0963	1.749
EXPRMT	-0.0243	-3.111
HS	0.0051	0.589
MALE	-0.0265	-2.383
AGE_I	-0.0016	-2.959
CAT05	-0.0571	-1.304
CAT30	0.0033	0.07
USCITZN	0.0076	0.472
FILIP	0.0214	1.481
HAWAIIN	0.0021	0.182
WHITE	0.0121	0.847
MIXED	0.0229	1.897
GOOD_ENG	-0.0115	-0.714
IN_TG	0.0643	1.359
MARRIED	-0.0228	-2.156
NEVMAR	-0.0096	-0.964
NOTPRIM	-0.0456	-2.323
VOLUNT	0.0243	2.968

Table A-13. Regression for Amount of Subsidized Child Care Received for Individuals Who Received Child Care

Regression Summary Statistics

Dependent Mean	1593.37
R-Squared	0.079
Number of observations:	180

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	3098.6265	1.083
EXPRMT	115.3034	0.347
HS	-32.9046	-0.089
MALE	-481.5012	-0.64
AGE_I	-42.9519	-1.681
CAT05	-2103.6267	-1.334
CAT30	-565.0403	-0.21
USCITZN	-8.6861	-0.011
FILIP	765.3694	1.309
HAWAIIN	410.5301	0.8
WHITE	431.1029	0.732
MIXED	576.9733	1.188
GOOD_ENG	-444.3508	-0.691
IN_TG	73.4153	0.028
MARRIED	-505.7812	-1.014
NEVMAR	-264.4850	-0.697
NOTPRIM	0.0000	see note
VOLUNT	353.8100	1.019

Note: NOTPRIM is dropped from this regression because all individuals in the regression were primary individuals on their cases.

Table A-14. Regression for Sanctions Imposed

Regression Summary Statistics

Dependent Mean	0.08257
R-Squared	0.027
Number of observations:	3,294

Regression Coefficients

Regressor	Coefficient	t-Statistic
INTERCEP	0.0546	0.813
EXPRMT	0.0659	6.936
HS	0.0029	0.273
MALE	0.0317	2.333
AGE_I	-0.0016	-2.519
CAT05	-0.0682	-1.276
CAT30	0.0032	0.055
USCITZN	0.0310	1.58
FILIP	0.0013	0.073
HAWAIIN	0.0149	1.061
WHITE	0.0112	0.643
MIXED	0.0230	1.567
GOOD_ENG	-0.0091	-0.463
IN_TG	0.0203	0.353
MARRIED	-0.0109	-0.845
NEVMAR	-0.0121	-0.993
NOTPRIM	0.0069	0.287
VOLUNT	0.0225	2.252